Glossary of Terms

■Appendix 1 – Descriptions and Definitions as used in this Workbook

abandoned or active water wells	A well that is abandoned cannot or will not be used for human or livestock water consumption, or is in such a state of disrepair that ground water can no longer be obtained from it. Abandoned or active water wells may provide a direct link for contamination from surface water to ground water. Agricultural chemicals, livestock waste, and other contaminants can filter through an abandoned well and contaminate ground water supplies. Abandoned or active water wells should be capped for future use or decommissioned. Well decommissioning is sealing and permanently closing a water well that is no longer in use. This practice applies to any drilled, dug, driven, bored, or otherwise constructed vertical water well determined to have no further beneficial use. An active well is a hole drilled, dug, driven, bored, jetted or otherwise constructed to an aquifer to provide water for livestock, wildlife, irrigation, human, and other uses. Generally, wells provide for general water needs of farming/ranching operations and to facilitate proper use of vegetation on rangeland, pastures, and wildlife areas.
access road	An access road is a travelway to provide a safe, fixed route of travel for moving livestock, equipment, products and supplies. This practice applies to roads that provide access to farm or ranch headquarters.
addressed any risks with appropriate measures	Using management procedures and installing conservation practices that mitigate or minimize the potential negative impacts of using pesticides. Examples include scouting to identify localized weed infestation and treating spot areas, selecting reduced-risk chemicals, and using available biological controls.

agriculture operation	"agricultural operation means agricultural land, and other lands determined by the NRCS Chief, under the control of the participant and operated with equipment, labor, accounting systems, and management that is substantially separate for any other unit." In delineating an agricultural operation, Farm Service Agency farm boundaries may be used. An applicant can aggregate farms into one contract, but only one application per sign-up period will be accepted.
apply animal manure or waste	The process of spreading animal feces, urine, and other material, such as bedding material and water, onto crop fields, pastures or rangeland. It also includes injecting liquid components (wastewater) of animal waste into the soil.
average adjusted gross income	To participate in CSP, your average adjusted gross income (AGI) for the 3 tax years immediately preceding the year the contract is approved cannot exceed $2.5 million. You may participate if your AGI exceeds $2.5 million and at least 75 percent of your AGI was derived from farming, ranching, or forestry operations. As defined in the 2002 Farm Bill, "average adjusted gross income" means the 3-year average of the adjusted gross income or comparable measure of the individual or entity over the 3 preceding tax years, as determined by the Secretary. The 3 preceding tax years would be the 3 years before the year for which the benefits are being requested.
classic gully	Erosion caused by the action of runoff water in concentrated flow channels. These flow channels are well-defined, permanent drainageways that cannot be crossed by ordinary farming operations.
Conservation Reserve Program	A voluntary program for agricultural landowners. Participants receive annual rental payments and cost-share assistance to establish long-term, resource conserving covers on eligible land. More information about CRP is available at: http://www.nrcs.usda.gov/programs/crp/
considered cropland	Also see cropland definition. Land that is in cropland, or set aside for cropland. It may be in hayland as part of a long-term rotation.

contour buffer strips	Strips of perennial vegetation alternated down the slope with cultivated strips that are farmed on the contour. Contour buffer strips usually are narrower than the cultivated strips. Vegetation in strips consists of grasses or a mixture of grasses and legumes.
control of some or all of the land you manage	The CSP participant does not need to own eligible land, but must demonstrate control of the land for the life of the CSP contract through ownership, a lease, or proof of a long-standing relationship as determined by NRCS. If the applicant is a tenant, the applicant must provide NRCS with the written evidence or assurance of control from the landowner.
cover	Establishing and maintaining vegetation or mulch to protect soil and water resources. Cover may be permanent or temporary.
cover crop	Grasses, legumes, forbs, or other herbaceous plants established for seasonal cover and conservation purposes. Examples include erosion control, nutrient cycling, carbon addition, wildlife habitat, and moisture regulation.

cropland (including hayland), vineyards, or orchards	A land cover/use category that includes areas used for the production of adapted crops for harvest. Two subcategories of cropland are recognized: cultivated and noncultivated. Cultivated land is row crops or close-grown crops and hayland or pastureland that is in a rotation with row or close-grown crops. Noncultivated cropland includes permanent hayland and horticultural cropland. Some categories and sub-categories are: - **Row crops:** Cultivated cropland comprising land in row crops, such as corn, soybeans, peanuts, potatoes, sorghum, sugar beets, sunflowers, tobacco, vegetables, and cotton. - **Hayland:** Cropland managed for the production of forage crops that are machine harvested. These crops may be grasses, legumes, or a combination. Hayland also includes land in set-aside or other short-term agricultural programs. - **Horticultural cropland:** Cropland used for growing fruit, nut, berry, vineyard, and other bush fruit and similar crops. Commercial flower operations, including bulb and seed production, ornamental cutting, and sales, are included. - **Close grown crops:** Crops generally drill-seeded or broadcast, such as wheat, oats, rice, barley, and flax. - **Fallow:** Cropland which has been left idle, either tilled or untilled, during the whole or greater portion of the growing season.
crop selection	Selection of salt tolerant crops can help produce satisfactory yields under saline conditions. The use of special management practices to minimize salinity can also favor crop growth.
deep tillage	Performing tillage operations below the normal tillage depth to modify the physical or chemical properties of a soil; may be used to address a salinity problem. More information about salinity in agriculture is available from the NRCS National Water and Climate Center at: http://www.wcc.nrcs.usda.gov/salinity/.
direct conduits	Channels for unimpeded flow of unfiltered contaminants to ground water. Unprotected wells, drainage wells, and sinkholes can act as direct conduits to ground water.

enrolled	The acres or area in question shall be considered enrolled in a conservation program at the time funds have been committed, a "tentative acceptance" letter has been sent to the participant, and the participant has indicated an interest to continue in the program.
environmental risks of pesticide use	The process that analyzes soil characteristics, pesticide properties (toxicity, solubility, affinity for soil organic matter), management factors (pesticide timing, application rate, tillage type, method, form) and climate to evaluate the risks associated with pesticide use.
ephemeral erosion	Erosion that occurs from the action of runoff water which concentrates in shallow flow channels when rills converge. These flow channels are obliterated or masked when filled with soil by tillage operations and re-formed in the same general location by subsequent runoff events.
farmsteads, headquarters, or livestock feeding and handling areas	Dwellings, outbuildings, barns, pens, corrals, confined livestock areas, and feeding and handling areas.
forage and animal balance	The total amount of available grazing forage and the addition of any roughage supply (hay, silage, green chop, etc.) balanced with the amount to be consumed by the total number of livestock and wildlife to meet their daily consumption needs.
Grassland Reserve Program	A voluntary program that helps landowners and operators restore and protect grassland, including rangeland, and pastureland, and certain other lands, while maintaining the areas as grazing lands. The program emphasizes support for grazing operations, plant and animal biodiversity, and grassland and land containing shrubs and forbs under the greatest threat of conversion. More information on GRP is available at: http://www.nrcs.usda.gov/programs/GRP/

grazing plan	Involves managing the controlled harvest of vegetation with grazing animals, including: • Selecting kinds of domestic animals suited to the terrain, climate and other existing grazing area conditions • Optimizing grazing distribution through placement of watering facilities, fences, or herding techniques • Identifying periods of grazing, rest, and other treatment for each management unit • Identifying and maintaining adequate cover on sensitive areas (riparian, wetland, and other habitats of concern) • Not negatively impacting any cultural resource or sensitive species • Identifying and monitoring key areas and key plants to evaluate grazing management decisions See Conservation Practice Sheet for Prescribed Grazing.
green manure crops	Close-growing crops that provide soil protection, seeding protection, and soil improvement between periods of normal crop production, and are incorporated into the soil.
ground water recharge areas	Places on the land where precipitation or surface water percolates through the soil to an underground bed or layer of earth, gravel, or porous stone that stores and yields water. Ground water flows in permeable geologic formations called aquifers, which are natural zones beneath the Earth's surface that often yield economically important amounts of water.
hay/pasture in rotation	Rotating long-term stands of hay or pasture with annual row crops for more than 2 years. This practice may be applied as part of a conservation management system to support one or more of the following: reduce soil erosion from wind; reduce sheet and rill erosion; maintain or improve soil organic matter; manage the balance of plant nutrients; improve water use efficiency; manage saline seeps; manage plant pests (weeds, insects, and diseases); provide food for domestic livestock; provide food and cover for wildlife.

hayland	See cropland. Includes permanent hayland and hayland as part of a long-term rotation. For the CSP self-assessment, hayland is included as a cropland land use. Pasture that is not cultivated, but is mowed for hay is addressed as a pastureland land use.
high residue crops	Crops that produce and leave high levels (more than 3,000 pounds per acre) of biomass in the field after crop harvest. High residue crops can include corn, small grains, hay, and other crops expected to produce adequate crop residue for soil improvement and protection from erosion. The crop aftermath is left to protect the soil.
highly erodible land and wetland conservation provisions of the 1985 Farm Bill	The Food Security Act of 1985, as amended, requires that all persons that produce agriculture commodities must protect all cropland classified as being highly erodible from excessive erosion. The provisions have been amended in the 1990, 1996, and 2002 Farm Bills. The purpose of these provisions is to remove the incentive to produce annually tilled agricultural commodity crops on highly erodible land (HEL) unless the HEL cropland is protected from excessive soil erosion. http://www.nrcs.usda.gov/programs/helc/
hydrologically-active areas	Areas such as sinkholes, wellheads, and rapidly permeable soil areas with direct access to ground water recharge areas or ground water.
irrigation induced erosion	The flow of irrigation water which causes soil erosion, which removes topsoil and organic material needed to maintain or improve soil condition.

irrigation water management	The process of determining and controlling the volume, frequency, and application rate of irrigation water in a planned, efficient manner. An irrigation water management plan can include: • records of irrigation dates and irrigation amounts applied relative to the crop growth stage • monitoring soil moisture, using techniques such as gypsum block, tensiometer, or other technology • using irrigation scheduling techniques, such as checkbook, evaporation pan, local climatic network, or similar technique • matching your crop production goals, crop variety, and planting dates to available water supply or projections • adjusting the timing, rate, and duration of water application to meet the crop needs • adjusting your irrigation management for nutrient and pesticide applications • using a tailwater recovery system • inspecting and making repairs to your irrigation system at least annually See Conservation Practice Sheet for Irrigation Water Management.
karst topography	Limestone areas with a topography peculiar to and dependent upon underground waters or solutions and that direct surface waters to underground routes.
livestock concentration areas	Livestock in a confined area, such as a feedlot or drylot, and given supplemental feed for all of their nutritional needs.
managing livestock access	Managing or limiting access of livestock to streams, ponds, surface waters, and waterways to prevent degradation of the streambank through activities such as the use of livestock access ramps or points, limiting use of riparian pastures, or use exclusion. See Conservation Practice Sheet for Use Exclusion.

manure handling and feed handling areas	Manure handling areas are areas where manure is loaded or moved for transport or storage. Feed handling areas are areas where foodstuffs for cattle are stored and transported for distribution. These areas are generally at a farm headquarters location.
manure storage or transfer facilities	Areas designed to store or transfer livestock manure. Livestock waste includes manure that may also contain bedding, spilled feed, water, or soil. It also can include wastes not particularly associated with manure, such as milking center or washing wastes, and milk, hair, feathers, or other debris. The manure storage area includes, but is not limited to, lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, and composting piles.
mixing and loading areas	Areas for pesticide or fertilizer mixing and loading.
no-till, strip-till, direct seeding, or mulch-till	Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface year-round, while growing crops in narrow slots, or tilled or residue-free strips in soil previously untilled by full-width inversion implements. The soil is left undisturbed from harvest to planting, except for nutrient injection. Seeds are placed in a narrow seedbed or slot made by coulter(s), row cleaners, disk openers, in-row chisels, or rototillers, where no more than one third of the row width is disturbed. Weeds are controlled primarily with herbicides. Row cultivation for emergency weed control utilizes undercutting implements that minimize residue burial.
noxious weeds	Plant species that have been designated "noxious" by law. The word "noxious" means harmful.

nutrient management	Accounts for the amount, source, timing, and method of applying nutrients to a growing crop. Regular soil testing, which estimates the availability of nutrients to plants, is necessary to monitor the balance of phosphorus, potassium, and other nutrients over the crop rotation. Plant tissue analysis compliments soil testing by measuring the nutrients actually taken up by the plant. See Conservation Practice Sheet for Nutrient Management.
PAM	Water-soluble anionic polyacrylamide (PAM) applied to soils in irrigation water to control soil losses from furrows. The polymers in PAM help give the surface soils more stability. PAM is an environmentally safe industrial flocculent.[1]
pastureland	Land managed primarily for the production of introduced forage plants. Pastureland cover may consist of a single species, a grass mixture, or a grass-legume mixture. Management usually consists of cultural treatments, such as fertilization, weed control, reseeding, or renovation, and prescribed grazing.
perennial cover	Grasses, forbs, and legumes maintained as ground cover to protect soil year round. Perennial species live through more than two growing seasons. Biannual crops (some clovers) have a two-year growth cycle.
pest control methods	Include consideration of both the environmental and human health impacts. There are a number of effective methods that, when used properly, reduce pest populations to economically acceptable levels, including pesticides and biological and cultural techniques.

[1] from commercial product information

pest management	Using environmentally sensitive prevention, avoidance, monitoring, and suppression strategies to manage weeds, insects, diseases, animals, and other organisms (including invasive and non-invasive species) that directly or indirectly cause damage or annoyance. A pest management plan can include: rate, method, timing, risk assessment, integrated pest management, appropriate mitigation, and recordkeeping. See Conservation Practice Sheet for Pest Management.
pitless adapter	A special pipe fitting that fits on a well casing to provide a sanitary and frost-proof seal between the casing and the water line.
plant tissue tests	Plant tissue analysis compliments soil testing by measuring the nutrients actually contained in the plant. Secondary nutrients and micronutrients not routinely measured in soil tests can be measured in plant tissue.
prescribed burning	A carefully planned activity to safely apply fire to predetermined areas on rangeland, native pasture, pastureland, or hayland to obtain management objectives such as brush removal or to favor native or indigenous plants. See Conservation Practice Sheet for Prescribed Burning.
private agricultural land	To be eligible for enrollment in CSP, land must be private agricultural land (including cropland, grassland, prairie land, improved pasture land, and rangeland), land under the jurisdiction of an Indian tribe (43 U.S.C. 1601 et seq.), and forested land that is an incidental part of an agricultural operation.
properly dispose of livestock mortalities	Treatment or disposal of livestock and poultry carcasses by off-the-farm animal mortality facilities or processes or by on-farm facilities.

protect ground water	Storing chemicals, gasoline, oil, etc. away from the wellhead and periodic inspection to protect ground water and maintain the condition where concentration criteria for a particular pollutant or limits on a condition (e.g., bad taste) are within tolerance, thereby allowing safe use of water by humans or animals.
rangeland	Land on which the climax or potential plant cover is composed principally of native grasses, grass-like plants, forbs or shrubs suitable for grazing and browsing, and introduced forage species that are managed like rangeland. This would include areas where introduced hardy and persistent grasses, such as crested wheatgrass, are planted and practices, such as deferred grazing, burning, chaining, and rotational grazing, are used with little or no chemicals or fertilizer being applied. Grassland, savannas, many wetlands, some deserts, and tundra are considered rangeland. Certain low forb and shrub communities, such as mesquite, chaparral, mountain shrub, and pinyon-juniper, are also included as rangeland.
reduction in fallow	More frequent cropping to reduce fallow periods and improve water uptake to address salt affected soils.
residue management	Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface year-round, while growing crops.

riparian vegetation	Ecosystems that occur along water courses or at the fringe of water bodies. Riparian cover consists of grasses, grasslike plants, forbs, trees, and shrubs. See Conservation Practice Sheets for Riparian Forest Buffer or Riparian Herbaceous Buffer.
rotation	Alternating crops in a planned sequence to provide diversity and crop residue needed for erosion control, soil conditioning, and pest management purposes.
saline and sodic soils	Includes soils that have a sodium adsorption ratio (SAR) of values of 13 and greater. Salt is sufficiently high in concentration that crop yields are adversely effected. These soils may require amendment applications, as determined by soil testing, to replace adsorbed sodium with soluble calcium. Monitoring saline soils may be part of a soil salinity plan that includes management of land, water, and plants to control subsurface soil water movement and to minimize accumulations of salts on the soil surface and in the root zone of nonirrigated saline seep areas. For more information about salinity in agriculture, visit the NRCS National Water and Climate Center at: http://www.wcc.nrcs.usda.gov/salinity/.
saline seeps	An area on the landscape where saline water leaches to the surface.

salt tolerant crops	Salt tolerance can change during the life cycle of a plant. Generally, sugar beets, cotton, barley, grapes, wheat, alfalfa, red clover, beans, and citrus are known for a level of salt tolerance.
scouting	Scouting, or monitoring pest populations, is part of an integrated pest management (IPM) system. IPM prescribes treating the portions of a farm or field that have identified higher than threshold levels of pests, rather than treating the whole field, resulting in using less applied farm chemicals.

setbacks from surface waters	A distance from gullies, ditches, streams, and rivers (surface water or direct conduits), within which manure, wastes, and pesticides should not be applied. The setback or buffer distance is based on slope, soils, vegetation, and sensitivity of the watershed.
share in the risk of producing crops or livestock on this operation	An owner, operator, landlord, tenant, or sharecropper who materially participates and shares in the risk of producing any crop or livestock; and is entitled to share in the crop or livestock available for marketing from a farm (or would have shared had the crop or livestock been produced).
sheet and rill erosion	The wearing away of topsoil by raindrop impact that detaches and removes soil from one point on the earth's surface and deposit it elsewhere. Sheet erosion refers to the removal of a relatively uniform thin layer of soil from the land surface by rainfall and surface runoff. Rill erosion refers to the erosion process on sloping fields in which numerous and random small channels are formed by water; occurs mainly on recently cultivated soils.
sinkholes	A surface opening that has direct connection to ground water.
soil amendments	The compounds added to correct saline-sodic soils, based on the amount of sodium in the soil related to the soil pH. Gypsum is the most commonly used soil amendment.
soil compaction	An increase in soil bulk density, and decrease in soil porosity, due to mechanical forces or livestock, which can limit root growth. In grazing terms, soil compaction is influenced by animal concentration and length of grazing period, as well as soil moisture and soil texture. If the soils are too moist during grazing periods, layers immediately below the surface can become compact and impede water and air infiltration, as well as root growth. Rotating or moving winter feeding areas helps prevent compaction.

soil moisture monitoring	The process of applying irrigation water based on measuring soil moisture and the plant available water holding capacity of the soil.
soil tests	A chemical, physical, or biological procedure that estimates the availability of nutrients to support plant growth. Generally, an analysis of nitrogen, phosphorous, and potassium is provided.
soils are wet	Working or grazing wet soil tends to compress the soil particles so that they become more tightly packed, leaving less room for penetration of water and air. This also makes it more difficult for plant roots to move through the soil. Wet soils are more often a problem in fine textured soils. 'Fine textured soils' is a broad group of soils large quantities of silt, clay, and other fine particles.
stabilized or treated	Ephemeral erosion control practices can include the use of waterways, modified tillage, terraces, contour buffer strips, or a combination of appropriate practices. Classic gullies require additional grade stabilization. Grade stabilization may include a structure used to control the grade and head cutting in natural or artificial channels.
subsurface drainage	Below ground movement of water that may be diverted by conduits or impervious soil strata.
surface waters	All water occurring above ground. This includes wetlands, lakes, rivers, and streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or ponds.
tailwater recovery system	A practice or group of practices installed to collect, store, and reuse irrigation water.

unprotected wells	Old wells, improperly installed wells, and abandoned or active water wells that impact ground water. Runoff can carry contaminated water into low rising, unprotected well openings. Well decommissioning is sealing and permanently closing a water well that is no longer in use. This practice applies to any drilled, dug, driven, bored, or otherwise constructed vertical water well determined to have no further beneficial use.
used for crop production	Land that is planted or considered planted to an agricultural commodity 4 out of the last 6 years prior to May 13, 2002.
waste utilization	Using agricultural waste, such as manure and wastewater or other organic residues, on land in an environmentally acceptable manner while maintaining or improving soil, water, air, plant, and animal resources.
well casing	Maintains the well opening and is generally steel or PVC in drilled wells. Well casing should extend to at least 1 foot above ground or above the 100-year flood level.
wellheads	That portion of the well that extends above ground level and offers a direct opening to ground water.
wetlands	Areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated hydric soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.
Wetlands Reserve Program	A voluntary program that provides technical and financial assistance to eligible landowners to address wetland, wildlife habitat, soil, water, and related natural resource concerns on private lands in an environmentally beneficial and cost-effective manner. The program provides an opportunity for landowners to receive financial incentives to enhance wetlands in exchange for retiring marginal land from agriculture. More information on WRP is available at: http://www.nrcs.usda.gov/programs/wrp/

wind erosion	The wearing away of topsoil by winds that abrade, detach, and remove soil from one point on the Earth's surface and deposit it elsewhere.
written records or documentation	Field diaries and logs which may include names, rates, and dates of application of all fertilizers, manures, composts, and pesticides. On range and pastures, this means keeping records on grazing rates, timing, and animal distribution to keep both livestock and forage plants healthy and to protect soil and water quality. Documentation needed to support such criteria may include (but would not be limited to): • Grazing duration, frequency, timing and rest by management unit • Hay harvest and yields • Kind, type, size and number of grazing animals • Site and production by management unit • Weather and other climate information • Monitoring sites information

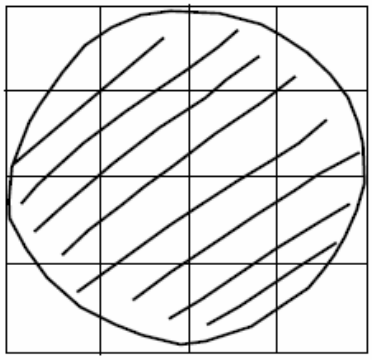
FIELD RECORD Examples[2]

Field Record # 0

Year 20XX
Field Size 135A
Field ID East Quarter
Location or Legal Description _____

_____

Soil Type/O.M. Silt loam/ 1.5%
Crop/Variety Corn/Good yield 546
Previous Crop/Variety Corn
Seeding Rate 28,000 Final Population 26,500
Planting Date 5/1 Harvest Date 10/20
Expected Yield 185 Actual 165
% Moisture 18



Note
If a spot treatment (less than 1/10 acre) application is made, write "spot" in "size of area treated".

Pesticide Application Record

Application	#1	#2	#3	#4
*Application date	4/28	5/1	6/15	
*Pesticide product name	Lasso	Counter 15G	Lorsban 4E	
*Pesticide EPA reg. no.	524-314	241-238	62719-220	
*Total RUP applied	337.5 qts.	1174.5 lbs	135 pints	
Applicator's name (from master list)	Bill	Jerry	Jerry	
Crop, commodity or site	Corn	Corn	Corn	
Size of treated area	135 Acre	135 Acre	135 Acre	
Conditions (wind, temperature, etc.)	5 mph 65° F	10-15 mph 74° F	5-10 mph 82° F	

[2] UNL Extension Publication http://ianrpubs.unl.edu/pesticides/ec2540.pdf

Record Keeping and Data Management Example

Understanding the health and productivity status of a ranch is helped by keeping records that can be consulted in planning efforts.

In broad terms this means using grazing rates, timing, and animal distribution to keep both livestock and forage plants healthy and to protect soil and water. Thus, record keeping needed to support such criteria might include (but would not be limited to):

- Grazing duration, frequency, timing and rest by management unit
- Hay harvest and yields
- Kind, type, size and number of grazing animals
- Site and production by management unit
- Weather and other climate information
- Monitoring sites information

This would include any records or data you collect in a systematic way to address the criteria found in the prescribed grazing management standard ftp://ftp.ftw.nrcs.usda.gov/pub/nhcp/standard/docs/528.doc.

WORKSHEET[3]

Grazing Lands Monitoring

PERCENT GROUND COVER

I. IDENTIFICATION

Name of Producer	Ecological site/range site
Pasture	Date

Enter reading on tape and check off appropriate column

Enter Tape increment	plant	litter	rock	Bare ground

Example: calculate the % of each column by:

$$\frac{\text{count number of each column}}{\text{Total no. of readings}}$$

$$\frac{15 \text{ plant}}{30 \text{ readings}} \times 100 = 50\% \text{ cover}$$

[3] Grazing Lan 2002